UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/611,414	06/30/2003	David P. Holden	4908 US	1954

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EXAMINER
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ART UNIT	PAPER NUMBER
1631	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	**Applicant(s)**
Advisory Action ***Before the Filing of an Appeal Brief***	*10/611,414*	HOLDEN ET AL.
	Examiner	**Art Unit**	
	JASON M. SIMS	1631	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED <u>22 December 2009</u> FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

   a) ☐   The period for reply expires _____months from the mailing date of the final rejection.

   b) ☒   The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

        Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

<u>NOTICE OF APPEAL</u>

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

<u>AMENDMENTS</u>

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will <u>not</u> be entered because

   (a)☐ They raise new issues that would require further consideration and/or search (see NOTE below);

   (b)☐ They raise the issue of new matter (see NOTE below);

   (c)☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or

   (d)☐ They present additional claims without canceling a corresponding number of finally rejected claims.

       NOTE: _____. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).

5. ☒ Applicant's reply has overcome the following rejection(s): <u>See Continuation Sheet</u>.

6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).

7. ☒ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

   The status of the claim(s) is (or will be) as follows:

   Claim(s) allowed: _____.

   Claim(s) objected to: _____.

   Claim(s) rejected: *1-15,17,19-21,84,85 and 90*.

   Claim(s) withdrawn from consideration: _____.

<u>AFFIDAVIT OR OTHER EVIDENCE</u>

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will <u>not</u> be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).

9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will <u>not</u> be entered because the affidavit or other evidence failed to overcome <u>all</u> rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).

10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

<u>REQUEST FOR RECONSIDERATION/OTHER</u>

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: <u>See Continuation Sheet.</u>

12. ☐ Note the attached Information *Disclosure Statement*(s). (PTO/SB/08) Paper No(s). _____

13. ☐ Other: _____.

/Marjorie Moran/
Supervisory Patent Examiner, Art Unit 1631

Continuation of 5. Applicant's reply has overcome the following rejection(s): The rejection of claims under 35 USC 101 as being drawn to non-statutory subject is withdrawn because of applicant's arguments.

Continuation of 11. does NOT place the application in condition for allowance because: Applicant argues that Ranade teaches using a k-means clustering algorithm based on nearest-centroid sorting for determining the genotype of a sample and not various embodiments of a method and system for genotyping utilizing a likelihood model.

Applicant's arguments are not found persuasive because the rejection stated that Ranade et al. do not explicitly teach generating a likelihood model as in step V). It is noted that the application stated that this was suggested because Ranade et al. do teach generating a model that predicts the probability of a genotype class based on the fluorescence values, wherein these values are compared within bounds of a particular data cluster one or more data clusters.   In other words, Ranade et al. teach that the method assigns a "quality score" to each genotype, wherein the score is the probability that a particular sample falls within a genotype class given its fluorescence values. Thus, generating a model, which is based on probability, for classifying a sample is suggestive of the concept of using models for classifying allels. The use of another model or statistical method to classify alleles, also based on prbability, was considered an obvious variation.   Therefore, Liu et al. reference was used because they teach a method of classifying alleles of clustered data, i.e. sets of data clustered into subsets, using a likelihood function at col. 3, lines 25-39, lines 29-67, and col. 8, lines 1-2.

Applicant further argues that Liu does not teach various embodiments of methods and systems of genotype clustering that utilize a likelihood model for genotype clustering based upon intensity information of a selected sample.

Applicant's arguments are not found persuasive because as discussed above, Liu et al. do teach a method of using a likelihood model for classifying samples and thus obviate the use of different statistical methods for data analysis, where one of ordinary skill in the art would have been capable of applying a known technique of using a likelihood model for use in data analysis to classify alleles, as discussed in the rejection mailed 6/24/2009.